5

10

15

ABSTRACT

An object of the present invention is to provide a hydrothermal electrolytic apparatus that allows a large amount of waste liquor to be efficiently treated. In order to attain this object, a hydrothermal electrolytic apparatus according to an aspect of the present invention comprises a reaction cell for electrolyzing influent at high temperature and high pressure wherein the overall surface area of a pair of electrodes located in the reaction cell 31 per 1 m³ of the volume of the influent is 0.05 m² or more. A hydrothermal electrolytic apparatus according to one embodiment of the present invention has two or more tubular reaction cells each having a metal inner wall serving as a cathode and an anode is provided in each of said reaction cells. A hydrothermal electrolytic process according to another aspect of the present invention comprises incorporating conductive particles into the influent to substantially increase the surface area of electrodes in hydrothermal electrolysis.